



Weed hosts of *Fusarium oxysporum* f. sp. *melongenae* in Turkey

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Abstract

Fusarium wilt disease on eggplant (*Fusarium oxysporum* Schlecht. f. sp. *melongenae*; *Fomg*), identified by host specialization, is one of the major fungal diseases causing economical yield losses in Turkey. Weeds are potential hosts of many plant pathogens, but these plants usually not exhibit disease symptoms. In 2010 and 2011, samples of weeds were collected from 11 distinct locations that cover a wide geographical area of Turkey. *Fusarium* spp. were isolated from five monocotyledonous species; *Sorghum halepense*, *Echinochloa crus-galli*, *Cynodon dactylon*, *Cyperus* spp, *Phalaris* spp and eight dicotyledonous species; *Chenopodium album*, *Sinapis arvensis*, *Solanum nigrum*, *Portulaca oleracea*, *Malva sylvestris*, *Tribulus terrestris*, *Xanthium strumarium*, *Amaranthus* spp. All of the weed species listed above are common throughout Turkey. A total of 212 *Fusarium* isolates colonizing them were identified. Based on culture characteristics and micromorphology, 63 isolates were identified as *Fusarium oxysporum*. The isolates from different weed hosts were characterized by means of pathogenicity and vegetative compatibility grouping (VCG) tests. Among these, 46 isolates were found pathogenic to eggplant cv. Kemer and identified as *Fomg* as evidenced by displaying symptoms of wilt. Pathogenicity tests indicated that 46 isolates were pathogenic to eggplant cv. Kemer and identified as *Fomg* as evidenced by displaying symptoms of wilt. All isolates from weed hosts were assigned to VCG 0320, which is the only vegetative compatibility group of *Fomg* detected worldwide. The results of this study indicate that several weed hosts may serve as alternative sources of inoculum for *Fomg*, during the growing season.

Keywords: Weed hosts, *Fomg*, eggplant, pathogenicity, VCG